

STATUS OF JAPANESE QUAIL *COTURNIX JAPONICA* IN THE WILD IN INDIA AND LEGAL ASPECTS OF ITS EXISTENCE IN THE INDIAN POULTRY INDUSTRY

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In the Indian bird and poultry markets, the Japanese Quail *Coturnix japonica* is probably the most commonly traded Galliformes, apart from the domestic chicken. Apart from the normal coloration of birds similar to their wild counterparts, white, fawn, and pied mutations varieties are also sold in considerable numbers. However, its legal status in the trade has been questioned from time to time. In this paper, we discuss the ornithological and avicultural aspects of Japanese Quail with regard to its (wild) population status and the legal aspects of its occurrence in the Indian poultry industry in India.

Key words: Japanese Quail *Coturnix japonica*, legal status, farming, domestic bird, Indian poultry industry

INTRODUCTION

The status of wild Japanese Quail *Coturnix japonica* in India has been an issue of much debate and equal concern, especially since the last two years for the following reasons:

The species has recently been uplisted to Near Threatened in the IUCN Red List from its earlier status of

Least Concern, as it is believed to have undergone a moderately rapid population decline due to hunting and shifts in agricultural practices (BirdLife International 2011; Rahmani 2012).

In September 2011, the Ministry of Environment and Forests (Wildlife Division) (MoEF), Government of India issued an advisory* regarding the prohibition of farming of Japanese Quail, since it is listed in Schedule IV of the Wildlife (Protection) Act (WLPA), 1972 (Letter 1, Srivastava 2011). However, many quail breeding farms still 'legally' exist in several Indian states with prior licences in accordance to the MoEF earlier circular dated June 27, 1997 (Letter 2, in litt.).

The MoEF circular of September 22, 2011, has been stayed by the Madurai Bench of the Madras High Court on February 01, 2012 (Press Trust of India 2012). It is not known as to whether the order has been subsequently modified or not. However, on April 27, 2012, the MoEF issued a letter in response to the query raised in the Lok Sabha by Shri S.S. Ramansubbo,



Fig. 1: Normal colouration of farm-bred Japanese Quail



Fig. 2: Farm-bred white coloured Japanese Quail

* The Ministry of Environment and Forest (MoEF) had not issued any gazette notification but only letters to concerned officers from time to time.

MP, clarifying the stand of the MoEF regarding "Need to renew licenses for Japanese Quail farming in the country" along with the question on livelihood issues (Letter 3, in litt.).

Further to this letter, on July 06, 2012, the MoEF again issued an advisory* on the subject of Japanese Quail farming stating "not to deny renewal of licences of existing units provided the license is not for an expanded capacity or a new unit" (Letter 4, in litt.).

Lastly, the legal status of the ongoing trade in Japanese Quail in India still remains somewhat unclear, and hence, there is a legal grey area in most cases of quail seizures. A basic question that most stakeholders have today is whether the sale and utilisation of domesticated Japanese Quail in various Indian bird and poultry markets is legal or illegal.

In this paper, we discuss the ornithological and avicultural aspects of Japanese Quail with regard to its (wild) population status in India and the legal issues of its occurrence in the Indian poultry industry. We make it clear that we do not endorse or oppose Japanese Quail farming in India, and suggest that any decision taken on this species in India be based on scientific facts (presented in this paper or available elsewhere).

STATUS OF JAPANESE QUAIL IN THE WILD IN INDIA

According to Rahmani (2012), the Japanese Quail is a purely migratory species in north-east India, in unknown numbers. As it is similar to the Grey Quail *Coturnix coturnix*, which is resident in India and with numbers augmented by winter migrants, many reported records of Japanese Quail from Assam and Manipur need further confirmation. Rasmussen and Anderton (2005) mention "Status uncertain in region... Vagrant in winter to Bihar (one specimen), Assam (Dibrugarh), and Manipur Valley". Ali and Ripley (1983) write about this species "Winter visitor in small numbers to Assam south of Brahmaputra river. Birds collected in Manipur in winter are intergrades with the nominate race". Choudhury (2000), probably based on earlier records, reported it as an uncommon winter migrant to Assam. Similarly, Sathyakumar and Kalsi (2007) suggest that Japanese Quail is a rare winter visitor to Assam, south of Brahmaputra river, in small numbers.

The Japanese Quail has a wide distribution outside India. It breeds in east Asia, from north Mongolia, Russia, to China, Japan and the Korean peninsula, and winters in Indochina, Myanmar, and Bhutan (BirdLife International 2011). Grimmett *et al.* (1998) mention that this species probably breeds in Bhutan; however, according to McGowan (1994), the species is poorly known in Bhutan with lack of records, which is a cause of concern.

Based on the available Indian ornithological literature and other publications stating the general distribution of the species in India, there seem to be hardly any published sight records of this species in recent years. It is listed as distributed in India based on former ornithological records and specimens. It seems that there have been no recent sightings of the species in the wild by any ornithologist, and if any, they need to be published. The species, being a rare winter migrant, remains unknown and unseen to most Indian ornithologists throughout its presumed stay in India. Moreover, there are not many expert ornithologists in the region of its distribution in India.

THE CONTROVERSY OF JAPANESE QUAIL AVICULTURE IN INDIA

Given that the Japanese Quail is listed in Schedule IV of the WLPA and that the MoEF had granted permissions for setting up quail farms, there is considerable confusion on the subject. From time to time, seizures are made by enforcement agencies, and consequently, there has been a lot of hue and cry from certain sections demanding a total ban on its trade. It is a common perception that the seized Japanese Quails and their eggs are obtained from the wild – even though no ornithologist, naturalist, or animal activist has seen the species in the wild in recent times. It is extremely difficult to presume that the large numbers of seized birds that had come to the market for sale are from the wild, e.g., the case of seizure of quail eggs from Shivaji Market in Bengaluru (Times of India 2008).

Another valid query against the seizures is whether the Indian poultry or bird traders have more knowledge of the distribution, seasonality, ecology, and habits of the species than ornithologists/Forest Department to be able to obtain them in sufficient numbers, and also have facilities to transport/smuggle them from their known distributional range in NE India to the markets in southern India, and additionally, sell the eggs at a low price (Rs. 4/egg) (Times of India 2008).

JAPANESE QUAIL IN THE INDIAN POULTRY INDUSTRY

In captivity, the Japanese Quail is a worldwide well-known aviculture subject and a poultry bird, and listed in the list of domesticated animals (Japanese Quail n.d.**). It has been selectively bred in captivity for meat and egg productivity in Japan for several centuries (Yamashina 1961). The species has been domesticated since the 12th century CE in Japan, where it was kept as a song bird. In China, the history of quail domestication goes back at least 1,500 years (Chang *et al.* 2009). The domesticated Japanese Quail was first introduced to Europe (France and Italy) in the 1950s

**n.d.: no date

(Sanchez-Donoso *et al.* 2012). Robbins (1981), the founder member of The Quail Group of the World Pheasant Association, in his book *QUAIL – THEIR BREEDING AND MANAGEMENT* commented on the Japanese Quail “Now hybrids in many forms, therefore, true form difficult to establish. Produced in large numbers for the table.” Ali and Ripley (1983) state “Has been domesticated in Japan as a table delicacy, for its meat and eggs, within the last 50 years or so by selection from quails formerly kept for song. Quail-breeding is now a flourishing minor industry. The birds are kept perpetually under artificial light like battery hens and with special feeding and care, good females lay from 250 to 300 eggs per year. They begin to lay when only 35–60 days old, and continue non-stop for 8–12 months thereafter.”

The Central Avian Research Institute (CARI), an institute of Indian Council of Agricultural Research, has been pioneering quail research and propagating quail farming as their mandate since 1974. According to their Director, Dr. R.P. Singh (pers. comm. 2012), eggs were first imported into India in 1974 from the University of California from where most of the Indian stock of farmed quails originates today. CARI has taken a lead to develop a number of new strains of egg and meat type quails by utilising imported founder stock. Parent stock for broiler quail lines, such as Cari Uttam, Cari Ujjawal, Cari Sweta, Cari Brown, and Cari Pearl for poultry farmers are now easily available at a price ranging between Rs. 15–30 each for an age group between 1–4 weeks (Indian Council of Agricultural research n.d.; Neel n.d.).

TRAFFIC India/WWF-India has been conducting a countrywide survey on illegal bird trapping and trade since 1994, covering the entire country with more than 300 field visits carried by the first author. Though a number of wild caught quail species, such as Common Quail *Coturnix coturnix*, Rain Quail *Coturnix chinensis*, and Jungle Bush-Quail *Perdica asiatica* were recorded and traded in bulk in Indian bird trade markets or poultry markets for food, not a single wild caught Japanese Quail specimen was recorded, and all the Japanese Quails recorded on sale (more than 20,000 birds) were of domestic origin (Ahmed 1997, 1999, 2000, 2002, 2004, 2012b, in prep.). However, during market surveys, it was observed that wild caught quails and francolins of various species were sometimes fraudulently sold under the garb of domesticated quails (Ahmed 1999). The seizure of domesticated quails on the presumption that they are wild birds causes substantial loss to traders.

Until 2011, before the MoEF notification came into force, the National Bank for Agriculture and Rural Development (NABARD) provided financial assistance to beneficiaries willing to take up quail farming and encouraged such livelihood options for farmers (Pinjarkar 2011).

DIFFERENTIATING DOMESTIC AND WILD JAPANESE QUAIL

It is essential to know how to differentiate a domesticated quail from its wild counterparts, especially in this context, as evidence in court cases. In the case of domesticated species, Sanchez-Donoso *et al.* (2012) state “As a result of the selection for life in captivity, these birds have lost their migratory restlessness, show some reluctance to move and fly, and have lower anti-predatory instinct.” A domesticated Japanese Quail without its flight feather clipped will not fly even if taken out of the cage, and in fact, will move around calmly and be unafraid of humans. Conversely, a wild caught quail freed from the cage will immediately try to fly or take to shelter if its flight feathers are clipped. The first author’s observations over the years suggest that domesticated quails will have no injury marks on their head, face, and other regions caused by banging into the cage bars while attempting to free themselves, a behaviour quite commonly seen in wild caught quails when initially introduced into captivity. In most cases, wild caught quails when put in cages will have signs of head injury, and may have all flight feathers plucked by traders to prevent injuries and escapes. Most wild caught quails will be in an emaciated condition and have to be force fed with grain, and their droppings are not semi-liquid. The faeces of domesticated quails fed largely on commercial poultry feeds are quite different from that of their wild counterparts on close examination. Moreover, wild caught quails do not generally accept artificial poultry feed in the initial days of captivity.

Comparative studies on domesticated and wild Japanese Quail by Chang *et al.* (2009) revealed differences in morphological pattern and ecological behaviour, along with significant differences between domestic and wild birds in reproductive traits, involving mating, fertility rate, and hatching rates of fertilised eggs. Wild Japanese Quail are seasonal breeding birds and usually breed between May and October, whereas domesticated quails lay eggs all year round. According to Yamashina (1961), domesticated quails show a high laying efficiency of 80% (250–300 eggs during the first year). The easy upkeep and high yield has made quail farming a lucrative option for farmers.

LEGAL ISSUES OF WILD AND DOMESTIC JAPANESE QUAILS IN INDIA

All species of quails found in the wild in India, except for the Himalayan (Mountain) Quail *Ophrysia superciliosa*, are collectively listed without individual species name in Schedule IV of the Indian Wildlife (Protection) Act, 1972 (Anon 2009) under the family Quails (Phasianidae). The

Himalayan Quail is individually named and included in Schedule I, Part III of the WLPA. As the Japanese Quail is listed in the Indian avifauna checklist (e.g., Ali and Ripley 1983), it automatically gets legal protection under the WLPA, which when amended in 1990–91, banned the trade in all Indian birds.

The legal status of the trade in Japanese Quail in India remains somewhat ambiguous and has been questioned from time to time by various state governments, animal activists, and enforcement agencies. In 1997, the MoEF wrote to the Forest Secretaries and Chief Wildlife Wardens of all states deciding to delegate the power of issuing licences for Japanese Quail hatcheries to the officer of the Department of Animal Husbandry, Government of India, not below the rank of Assistant Livestock Officer and for officers of the state Animal Husbandry Department not below the rank of Veterinary Assistant Surgeon. States were accordingly requested to issue necessary notifications under the WLPA empowering such officials to issue licences under intimation to the MoEF (Letter 1 in litt.). After this MoEF notification, several facilities breeding and shops selling Japanese Quail have come up after obtaining licences across the country.

Despite this, farm bred Japanese Quail get seized from time to time in various states since quails are listed in Schedule IV of the WLPA. The Japanese Quail bred and sold in farms/shops are not only of the wild coloration, but also white (Figs 1 and 2), fawn, and pied. Some poultry breeders and bird dealers tried to breed and sell more colour mutation quails rather than normal coloration birds to help enforcement and the general public to understand the difference between wild and domesticated birds. Universities such as the Guru Angad Dev Veterinary and Animal Science University in Punjab (Guru Angad Dev Veterinary and Animal Science University n.d.), Virtual University for Agricultural Trade, Department of Agriculture, Government of Kerala and other institutions (Poultry Quails n.d.) tried to develop a more hardy and white-coloured strain of Japanese Quail. These projects were challenged by animal activists suggesting that they were illegal as they did not have permission from the Committee on Animal Experimentation (Dugar 2002).

As the Japanese Quail continues to be listed in Schedule IV of the WLPA, hunting, capturing, killing or trade in such birds clearly appears to be a violation of the WLPA. The farm bred quails are also "Captive Animals" as per Sec 2(5) of the WLPA and liable to attract the provisions against hunting as defined in Sec 2(16). On receiving repeated representations about the violation of WLPA from several quarters, the MoEF on September 22, 2011, issued another letter in this regard (Letter 2, in litt.) requesting states/UTs not to issue any new licences for farming of Japanese Quail and also not to issue

any permission for expansion or augmentation of existing facilities. However, this letter is silent on the crucial point of the status of existing farms and quails bred and sold by them, even while specifying that by virtue of the Japanese Quail being included under Schedule IV of the WLPA, such species cannot be killed/hunted or captured. This notification has made the enforcement agencies and various stakeholders quite unclear as to what needs to be done about birds seen in the markets. Are they from licensed farms with permissions? If not, can the quails in markets be seized? Can a common man buy them not violating the law of the land? Can restaurants serve it?

In our view, the following options need to be closely examined and debated among policy makers who should necessarily include ornithologists, aviculturists, government officials, and animal activists before a clear and implementable decision can be taken:

1. The Japanese Quail continues to be listed under the WLPA and its farming is completely prohibited and no breeding or sale allowed: In this case, what happens to the existing birds that are mutations, hybrids and purely domesticated (not just captive-bred) ones? Should domestic populations be completely restricted from breeding or should they be culled once and for all, as they may be unfit to be released in the wild? There is a need to also look into how many such legal farms and institutions propagating quail farming actually exist in various Indian states. What is the actual parent stock and how many offsprings are produced each year?

2. The Japanese Quail be taken out of the WLPA as there is hardly any recent evidence of this species in the wild within Indian limits: In this case, a team of competent ornithologists need to survey its reported wintering area in India and confirm its population status. As it is most likely to be a winter vagrant to India, it may not in all likelihood be a true claim that wild caught Japanese Quails are collected from the wild and are traded. However, one needs to be vigilant as the Japanese Quail looks quite similar to Common Quail.

3. The Japanese Quail continues to be listed under the WLPA but a specific provision permitting captive breeding of domesticated strains and its sale is made in the WLPA as per Sec. 11 and 12: The problem clearly is that of an administrative order, permitting something that is not within the provisions of the WLPA. A comparative example would be the case of Indian Peafowl *Pavo cristatus*, where, while the species is listed in Schedule I, the domestic trade in peacock tail feathers and products is permitted (Ahmed 2008) by a specific mention to this being made in the WLPA itself, and not by any separate notification.

4. In a manner similar to the Blue Rock Pigeon (*Columba livia*) that is excluded from Pigeons (Columbidae) list in the Schedule IV, the Japanese Quail can be excluded from the WLPA by simply stating: Quails (Phasianidae) except the Japanese Quail (*Coturnix japonica*) in the Schedule IV listing.

Similarly two more Indian bird species, namely the Red Junglefowl *Gallus gallus* (resident) and Mallard *Anas platyrhynchos* (winter visitor) are ideal avian species for comparison with the Japanese Quail issue. Almost all varieties of the domestic chicken *Gallus gallus domesticus* and duck *Anas platyrhynchos domesticus* have been derived from the wild Red Junglefowl and Mallard, and are farmed and traded throughout India. Similarly, the domesticated variety of the Japanese Quail can be named *Coturnix japonica domesticus*, which can then be allowed for trading, and this will keep the integrity of their wild counterparts safe. Additionally, since there is no ban on the domestic sale of any exotic animal within India and the farming and selling of domestic Turkey *Meleagris gallopavo*, domestic Guinea fowl *Numida meleagris*, Emu *Dromaius novaehollandiae*, and rabbit is not questioned, the domesticated Japanese Quail may very well fit this group.

CONCLUSION

Awareness about the illegal bird trade and curtailing the demand for wild birds as pets, food, release, black magic, sport, and medicinal use has been a growing concern for many enforcement agencies, NGOs, and individuals (Ahmed 2004, 2010). However, there is also a need to understand the fact that there are three categories of birds in trade.

1. One group that has species that are caught from the wild, which are either extremely difficult to breed in captive conditions, or available in bulk from the wild at negligible cost and have a high market demand. For instance the munias (*Lonchura* spp.) are difficult to breed in captivity, but are available from the wild in thousands.

2. The second category is of birds that can be captive bred in a closed set-up, but the species has not been fully domesticated. Individuals from wild-caught are more in the trade and few from captive-bred sources. For instance, most species of macaws and cockatoos are easier to catch from the wild than to obtain from a captive-bred source.

3. The last category is of birds of pure domestic origin. Birds that have been domesticated, crossbred, and bred in thousands worldwide over several generations and years and now have many colour mutations. Their wild counterparts are more expensive and difficult to acquire in comparison to the farmed source. For instance, the Budgerigar (*Melopsittacus undulatus*) and Japanese Quail.

The trade in wild animal and birds, discussed under the first category, should be totally banned and anyone doing it should be severely punished in any country, state or region. Permitting the second category of captive-bred birds for any trade purpose will vary from country to country, depending on the country's expertise, infrastructure, technology, and its administrative ability to identify a captive-bred bird from a wild-sourced one through closed ringing or micro-chipping. Trade in the second category of birds cannot be recommended in India at this moment, as we still lack the resources and expertise to undertake such an exercise.

Monitored trade in the third category of domesticated mutant/crossbred bird varieties can actually help conserve wild birds by taking away the pressure from their wild counterparts. Such trade as in farmed Japanese Quail could be allowed, albeit with the required safeguards to prevent wild counterparts being sold fraudulently in the garb of exotics or domestics (Ahmed 1999).

We also need to take into consideration that more than 5,000 families from traditional bird trapping communities still depend on the wild bird trade in India, including quails and partridges (Ahmed 2012a). Studies on wild bird trafficking also show that if domestic birds are 'wrongly' seized, traders and trappers resort to selling wild birds, which require less investment compared to farmed sources (Ahmed 2012b). With the high demand for quail meat in India, there is a need to permit the sale of the meat of domesticated quail (a practice gaining more prominence in Indian birds and poultry markets since the past decade), as an ideal alternative to wild birds traded for meat. We need to remember that the trade in wild bird meat goes totally undocumented or unnoticed, as they are sold from door to door. In this kind of a situation, our policies concerning Japanese Quail need to be re-examined for clarity of law and rules to be implemented to conserve wild Indian quails in general.

With the enigmatic Himalayan Quail, a Critically Endangered endemic Indian species being extinct and another endemic species of north-east India, the Manipur Bush-quail (*Perdica manipurensis*), listed as Vulnerable and with one or two sightings since its last confirmed record in the early 1930s (Rahmani 2012), we need to prioritise our conservation efforts in a more focused manner and accept the reality of the domesticated Japanese Quail presence in India, rather than take a sentimental approach, especially since the farming of Japanese Quail could lessen, if not curtail, the demand for wild quails and partridges.

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